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NASA Procedural Requirements

COMPLIANCE IS MANDATORY**NPR 8910.1A**Effective Date: March 15,
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Subject: Care and Use of Animals

Responsible Office: Office of the Chief Health & Medical Officer[| TOC](#) | [Preface](#) | [Chapter1](#) | [Chapter2](#) | [Chapter3](#) | [Chapter4](#) | [Chapter5](#) | [Chapter6](#) | [Chapter7](#) |
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Chapter 5. Flight Activities

5.1. In addition to review by the Investigators' IACUCs, flight and supporting ground-based activities involving animals must be approved by the NF ACUC in accordance with the AWA, its implementing guidelines, PHS Policy, and this NPR. Associated ground-based activities shall also be reviewed by the IACUC at the Center where the work will be conducted. When ground-based activities are performed by an international partner, the laws and regulations of the country where the activities occur must be followed, with a minimum standard being the international guiding principles, "International Guiding Principles for Biomedical Research Involving Animals."

5.1.1. The process outlined in section 5.1 applies to all experiments flown on NASA flight platforms regardless of the sources of support, and to all experiments flown on non-NASA platforms, including international vehicles, if they are supported by NASA.

5.1.2. Animal activities to be flown on board NASA-crewed spacecraft must be reviewed by the IRB at JSC for areas related to crew health and safety associated with exposure to the animals.

5.2. Where multiple experiments approved individually are proposed to be conducted with the same experimental animal, an integrated proposal must be reviewed by the NF ACUC prior to commencement of integration studies.

5.3. Protocols submitted to the NF ACUC for proposed flight activities must include an animal use and disposition plan that incorporates all animals necessary to support any proposed flight activity, including those necessary to cover launch delays and other contingency planning. Also included in such plan shall be animals required to support any ground-based studies necessary to validate or integrate proposed in-flight animal-based activities and hardware. As part of the review of proposed animal care and use activities, Agency IACUC's will ensure that investigators and NASA program, project, and mission managers minimize the number of animals involved.

5.4. The NF ACUC will submit each evaluation report to the ANO.

5.5. Animal activities utilizing a NASA facility in support of flight activities must also be approved by that Center's IACUC and the NF ACUC, regardless of the institutional or national origin of the activities or the sources of support.

5.6. For veterinary care, compliance, and response to events during flight, the following guidelines apply:

5.6.1. The NF ACUC is responsible for approved animal care and use procedures and activities including preflight, flight, and postflight. In addition, the IACUC's at the ARC, JSC, KSC, and MSFC must also approve any animal activities conducted at their Centers. As previously noted, upon request from the ARC IACUC for cause, the ANO may officially transfer responsibility to an alternate IACUC on a case-by-case basis. However, protocols and results must be provided to the NF ACUC to facilitate their oversight and coordination of the animal flight research program and animal care and use decisions during flight activities.

5.6.2. The NASA Chief Veterinarian is responsible for veterinary support and for identifying a duty veterinarian available in person or by telephone at all times during flights that include animal activities.

5.6.3. It is recognized that protocols for animal activities may need to be modified in-flight as procedures are refined in response to operational constraints or experimental variation. Significant changes to protocols that become necessary during flight shall require the approval of the majority of a quorum of the NF ACUC or other designated

IACUC. The IACUC chairperson or designee shall expeditiously seek this approval by designated review consistent with current acceptable procedures. The duty veterinarian has the authority to temporarily suspend activities or to grant a temporary approval to the requested change until the IACUC can review the request. The payload mission manager in the control room must immediately be told of this requested substantive change or temporary suspension of activities.

5.7. Mechanisms for interaction and coordination among NASA IACUC's and veterinarians with responsibilities for preparation, execution, and postflight animal activities will be developed and implemented by the NACUPRB, with concurrence and approval of the ANO.

5.8. Adequate resources must be provided and appropriate priority must be assigned to ensuring animal welfare requirements during the conduct of space flight research.

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